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Villar

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(54) **EQUIPMENT STAND**

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F24F 13/32 (2006.01)

(52) **U.S. Cl.**
CPC ***F24F 13/32*** (2013.01)

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CPC F16M 5/00; F16M 9/00; F16M 11/00; F16M 11/30; F16M 11/20; F24F 13/32
USPC 248/237, 146, 158, 688, 677, 678
See application file for complete search history.

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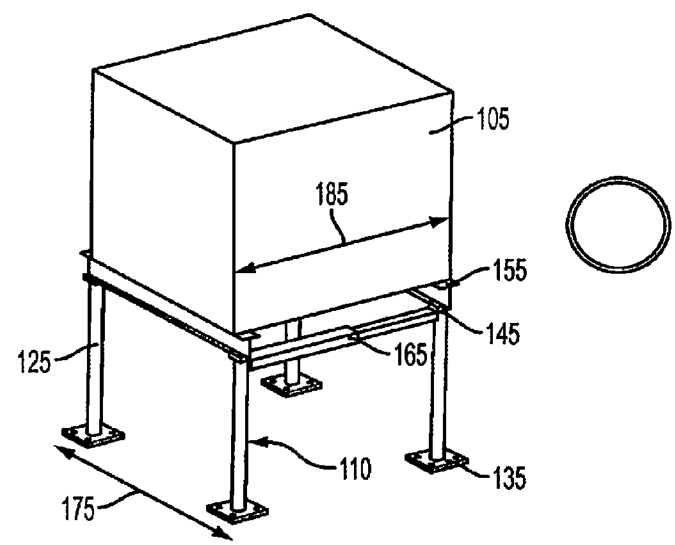
(57) **ABSTRACT**

An A/C system can be provided. The A/C system can include an A/C unit and an equipment stand supporting the A/C unit. The equipment stand can include a plurality of legs. Each leg can include a hollow tube defining an interior hollow space bounded by an interior surface of the hollow tube and a longitudinal internal support means for strengthening the hollow tube integrally formed in the interior surface of the hollow tube. Further, an equipment elevation system can be provided that includes at least one piece of equipment and an equipment stand supporting the at least one piece of equipment.

21 Claims, 4 Drawing Sheets



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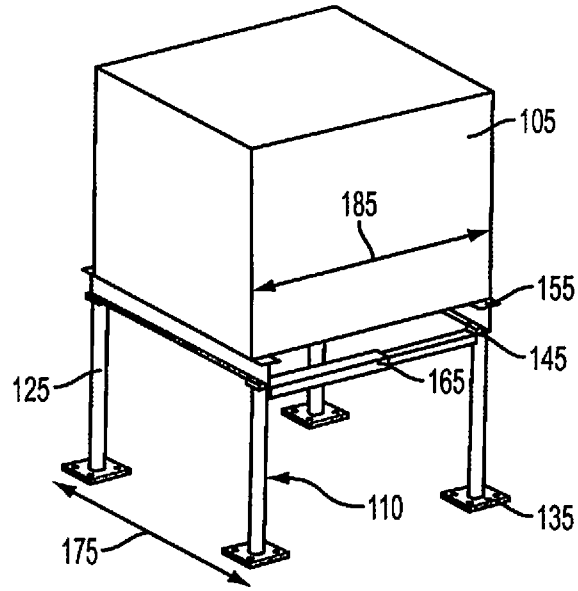

FIG. 1A

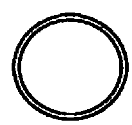

FIG. 1B

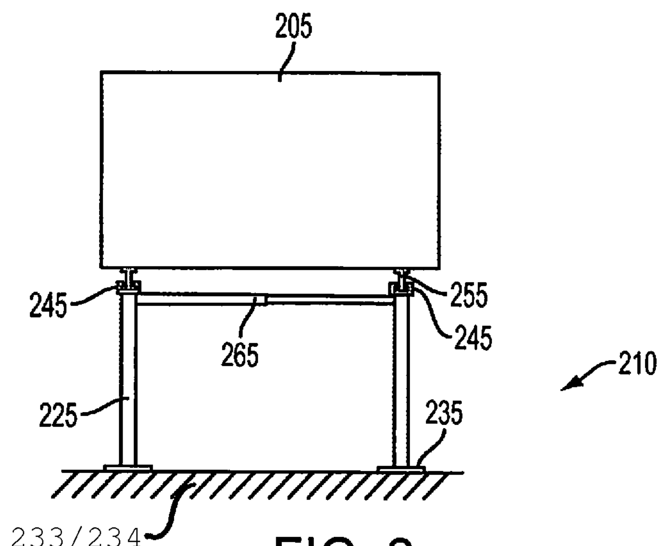

FIG. 2

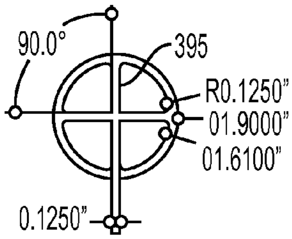

FIG. 3A

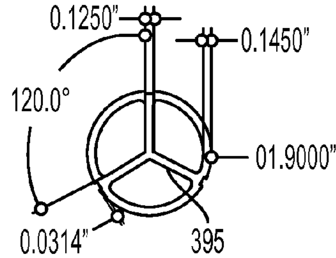

FIG. 3B

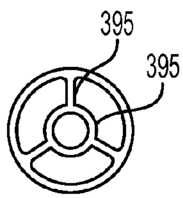

FIG. 3C

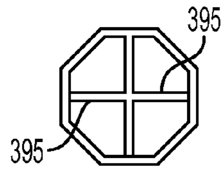

FIG. 3D

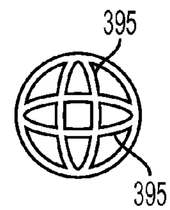

FIG. 3E

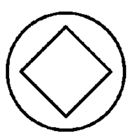

FIG. 3F

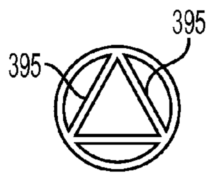

FIG. 3G

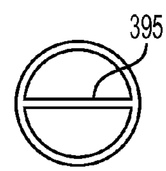

FIG. 3H

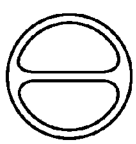

FIG. 3I

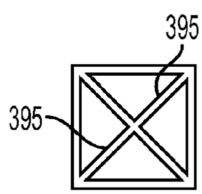

FIG. 3J

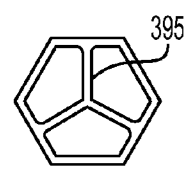

FIG. 3K

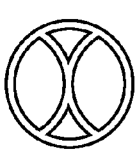

FIG. 3L

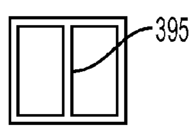

FIG. 3M

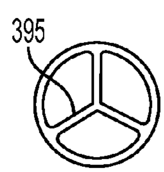

FIG. 3N

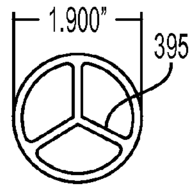

FIG. 3O

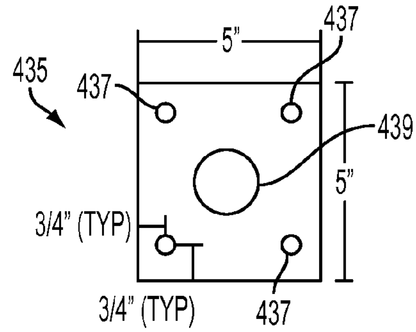

FIG. 4A

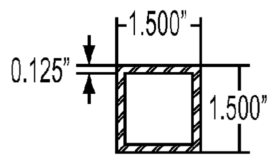

FIG. 4B

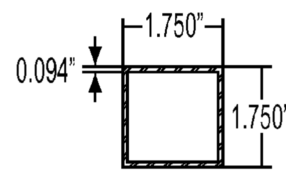

FIG. 4C

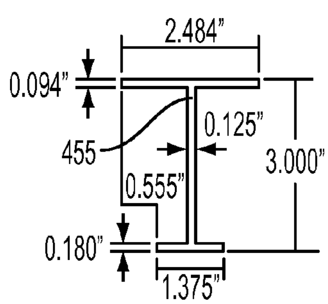

FIG. 4D

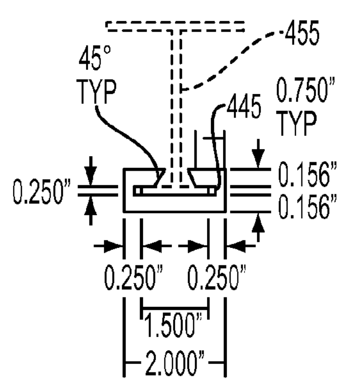

FIG. 4E

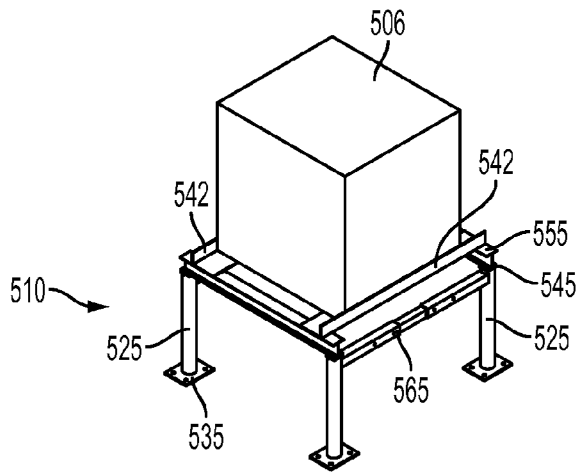

FIG. 5A

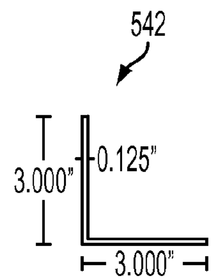

FIG. 5B

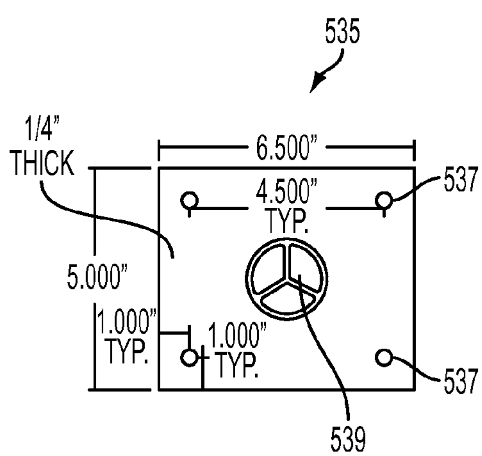

FIG. 5C

EQUIPMENT STAND

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to equipment stands, including stands for elevating equipment.

2. Description of the Related Art

An air conditioner (A/C) is an appliance designed to dehumidify and extract heat from an area. Power generators are designed to supply power to a facility, such as a home and a business. The installation of A/C units and power generators must meet local, state, and federal standards, if any exist. For example, the rooftop installation of A/C unit(s), such as with multifamily dwellings or businesses, must be elevated to a specific height dependent on the size of the unit, so as to allow access to the roof of a building. An A/C stand is often used to reach the appropriate height. As a further example, a power generator that is positioned adjacent to a building may need to be elevated with a stand to prevent electrical issues that may be caused by flooding.

Any A/C stand, in fact any stand that rises above ground-level, must also meet any specified building code. Building codes most often reflect the state (or city) in which they are enacted. For example, in the State of Florida, the state building code takes into consideration the likelihood of hurricanes, the accompanying winds, and rains that may cause flooding. In addition, building codes can change over time. For instance, the wind loading criteria for mechanical equipment, appliances, and supports that are exposed to wind increased from one hundred forty miles per hour in the old Florida Building Code 2007, American Society for Civil Engineers (ASCE) 7-05, to one hundred eighty miles per hour in the more recently enacted Florida Building Code 2010, ASCE 7-10. Of note, Florida Building Code specifies wind load requirements based on location from as low as one hundred ten miles per hour to as high as one hundred eight miles per hour. In addition, the required design pressures that rooftop structures and equipment are required to meet became more stringent between the 2007 and 2010 building code changes.

BRIEF SUMMARY OF THE INVENTION

Embodiments of the present invention address deficiencies of the art in respect to equipment stands. In an embodiment of the invention, an A/C system is provided. The A/C system can include an A/C unit and an equipment stand supporting the A/C unit. The equipment stand can include multiple different legs. Each leg can be formed by a hollow tube with longitudinal internal support means for strengthening the hollow tube. The longitudinal internal support means can be integrally formed in the interior surface of the hollow tube.

Another embodiment of the invention provides for an A/C system including an equipment stand adapted to receive and secure an A/C unit. The equipment stand can include multiple different hollow tubes. Each hollow tube can define an interior hollow space bounded by an interior surface of the hollow tube. Further, the hollow tube can include at least one flange integrally formed along at least one portion of the interior surface of the hollow tube.

In yet a different embodiment, an equipment elevation system is provided. The equipment elevation system can include at least one piece of equipment and an equipment stand supporting the at least one piece of equipment. The equipment stand can include multiple different legs. Each leg can be formed by a hollow tube with longitudinal internal support means for strengthening the hollow tube. The longi-

tudinal internal support means can be integrally formed in the interior surface of the hollow tube.

Additional aspects of the invention will be set forth in part in the description which follows, and in part will be obvious from the description, or may be learned by practice of the invention. The aspects of the invention will be realized and attained by means of the elements and combinations particularly pointed out in the appended claims. It is to be understood that both the foregoing general description and the following detailed description are exemplary and explanatory only and are not restrictive of the invention, as claimed.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

The accompanying drawings, which are incorporated in and constitute part of this specification, illustrate embodiments of the invention and, together with the description, serve to explain the principles of the invention. The embodiments illustrated herein are presently preferred; however, the invention is not limited to the precise arrangements and instrumentalities shown, wherein:

FIG. **1**A is an isometric projection of a A/C unit on an equipment stand in an embodiment of the invention;

FIG. **1**B is a prior art cross section of cylindrical tubing used in a leg of an equipment stand;

FIG. **2** is an end elevation view of a A/C unit on an equipment stand in an embodiment of the invention;

FIG. **3**A is a cross section of a leg of an equipment stand in an embodiment of the invention;

FIG. **3**B is a cross section of a leg of an equipment stand in an embodiment of the invention;

FIG. **3**C is a cross section of a leg of an equipment stand in an embodiment of the invention;

FIG. **3**D is a cross section of a leg of an equipment stand in an embodiment of the invention;

FIG. **3**E is a cross section of a leg of an equipment stand in an embodiment of the invention;

FIG. **3**F is a cross section of a leg of an equipment stand in an embodiment of the invention;

FIG. **3**G is a cross section of a leg of an equipment stand in an embodiment of the invention;

FIG. **3**H is a cross section of a leg of an equipment stand in an embodiment of the invention;

FIG. **3**I is a cross section of a leg of an equipment stand in an embodiment of the invention;

FIG. **3**J is a cross section of a leg of an equipment stand in an embodiment of the invention;

FIG. **3**K is a cross section of a leg of an equipment stand in an embodiment of the invention;

FIG. **3**L is a cross section of a leg of an equipment stand in an embodiment of the invention;

FIG. **3**M is a cross section of a leg of an equipment stand in an embodiment of the invention;

FIG. **3**N is a cross section of a leg of an equipment stand in an embodiment of the invention;

FIG. **3**O is a cross section of a leg of an equipment stand in an embodiment of the invention;

FIG. **4**A is an engineering drawing of an embodiment of a base plate used in an equipment stand in an embodiment of the invention;

FIG. **4**B is an engineering drawing of an embodiment of a cross section of tubing used to form a cross-member in an equipment stand;

FIG. **4**C is an engineering drawing of an embodiment of a cross section of tubing used to form a cross-member in an equipment stand;

FIG. **4**D is an engineering drawing of a cross section of an embodiment of a rail used in an equipment stand in an embodiment of the invention;

FIG. **4**E is an engineering drawing of a cross section of an embodiment of a C-channel configured to fit a rail used in an equipment stand in an embodiment of the invention.

FIG. **5**A is an isometric projection of an equipment stand upon which equipment, such as a power generator, is disposed upon in an embodiment of the invention;

FIG. **5**B is an engineering drawing of an end view of a support angle in an equipment stand; and,

FIG. **5**C is an engineering drawing of an embodiment of a base plate used in an equipment stand in an embodiment of the invention.

DETAILED DESCRIPTION OF THE INVENTION

Embodiments of the invention provide for an equipment stand. In accordance with an embodiment of the invention, an A/C system can include an A/C unit elevated per applicable building code by an equipment stand. The equipment stand can include multiple legs. Each leg can be formed from hollow tubing and internal flanges extending from one portion of an internal surface of the tubing to another portion of the internal surface of the tubing. For instance, the flanges can include different spokes extending from different portions of the internal surface of the tubing of the leg. In this way, each leg can enjoy superior strength so as to sustain a higher wind load without requiring the leg to have a particularly large diameter.

In further illustration, FIG. **1**A is an isometric projection of an A/C unit **105** affixed to an equipment stand **110** in an embodiment of the invention. The equipment stand **110** can include a plurality of base plates **135** (see FIGS. **4**A and **5**C for different embodiments of a base plate). In one embodiment, there can be a total of four base plates **135**. Each base plate **135** can be configured to allow a leg **125** to fit. In other words, if there are four base plates **135**, there would be four legs **125**. Of note, the equipment stand **110** can include a varying number of legs **125** and, hence, base plates **135**. Further, a plurality of equipment stands **110** can be configured so that a plurality of A/C units **105** or other equipment, such as power generators, can be elevated; therefore, the number of legs **125** and base plates **135** may further vary in this type of embodiment. A leg **125** can be made from tubing, which can be of varying shapes, including but not limited to elliptical, cylindrical, polygonal, circular, oval, square, and rectangular. In addition, each leg **125** can be a hollow tube defining a hollow space bounded by an interior surface of the hollow tube. The hollow tube can further include a longitudinal internal support means for strengthening the hollow tube. The longitudinal internal support means can be integrally formed in the interior surface of the hollow tube. Further, each leg **125** can have either the same or different cross section as another leg **125**. Even further, each leg **125** can also taper. For instance, if a leg **125** is made from cylindrical tubing, the radius of the tubing can vary along the length of the tube.

For example, in an embodiment of an equipment stand **110**, the cross section of a tube forming a leg **125** can be circular comprising a plurality of flanges. A flange is defined as a protruding rim, edge, rib, or collar, as on a wheel or pipe shaft, used to strengthen an object, hold it in place, or attach it to another object. In one instance, there can be four flanges; each flange can extend from the center of the tube (center of the circular cross section) to the edge of the tube, where each flange is separated by about a ninety degree angle (as illustrated in see FIG. **3**A). In another embodiment, there can be a plurality of flanges, extending from the interior (often, but not necessarily in the center) of a tube of varying shapes to an edge or interior surface of the tube. In yet another embodiment, there can be three flanges, where each flange can extend through a center of the interior hollow space of a cylindrical tube to a portion of the interior surface of the hollow tube. Further, each flange can be separated by about one hundred twenty degrees (as illustrated in FIGS. **3**B, **3**N, and **3**O). In even another embodiment, an equipment stand **110** can be adapted to receive and secure an A/C unit **105**. The equipment stand **110** can include multiple, different hollow tubes. Each hollow tube can define an interior hollow space bounded by an interior surface of the hollow tube and can include at least one flange integrally formed along at least one portion of the interior surface of the hollow tube.

A cross-member **165** can be attached between a pair of legs **125**. More specifically, in one embodiment, one end of a cross-member **165** can be attached to the approximate top end of a leg **125**. The opposite end of the cross-member **165** can be coupled to the top end of a second leg **125**. Each cross-member **165** can be coupled to each leg **125** using any method now known or later developed, including but not limited to fastening (using pins, screws, etc.) and welding. There can be a plurality of cross-members **165** depending on how many equipment stands **110** are coupled together. In one embodiment, there are two cross-members **165**, each cross-member **165** being attached between a pair of legs **125** with each cross-member **165** situated along the depth **185** of an equipment stand **110**. The two cross-members **165** can be situated opposite each other in a parallel manner in an equipment stand **110**. A cross-member **165** can be made of any material, including metal, such as aluminum.

Further, a cross-member **165** can be manufactured using any method now known or later developed, including but not limited to extrusion. In one embodiment, a cross-member **165** can be formed by coupling two tubes. More specifically, a cross-member **165** can be formed with a first square tube, having a first perimeter, and a second square tube, having a second perimeter, where the first perimeter is smaller than the second perimeter. In this way, the first tube can nest in the second tube. Further, the first tube can be interlocked with the second tube and can be coupled together using a thru bolt or similar fastener. In addition, a cross-member **165** can be telescopic. This enables an equipment stand **110** to vary in size to accommodate different sized A/C units **105**. In another embodiment (as illustrated in FIG. **5**A), the cross-member **165** can be formed by coupling three tubes. More specifically, a cross-member **165** can be formed by a first square tube, having a first perimeter, and two second square tubes, each second square tube having a second perimeter. Of note, the two second square tubes can have the same second perimeter. In this way, the first tube can nest in at least a portion of each second tube. Further, the first tube can be interlocked with each second tube and can be coupled together using a thru bolt or similar fastener. Of further note, though square tubes are referenced, the tubes can be any shape, including but not limited to oval, circular, elliptical, and rectangular.

A rail **155** can be coupled to the top of a pair of legs **125**. The bottom of each end of a rail **155** can be configured to fit a C-channel **145**. Each C-channel **145** can be coupled to the top end of each leg **125**. In other words, in one embodiment of an equipment stand **110**, there can be a plurality of rails **155**, for instance two, where each rail **155** is situated along the width **175** of an equipment stand **110**, where the bottom of each end of a rail **155** is configured to fit a coupled C-channel **145** (for a total of two C-channels **145** per rail **144**), and each C-channel **145** is coupled to the top of each leg **125**. Each rail

155 is situated opposite a second rail 155 and perpendicular to a cross-member 165. In one embodiment, the rail 155 is an I-beam. The I-beam and the C-channel 145 can each be made of any material, including but not limited to metal, such as aluminum alloy.

An A/C unit 105 can be coupled to the rails 155 of an equipment stand 110. Specifically, the A/C unit 105 can be coupled using a variety of methods, including but not limited to fastening, with for example, straps, bolts, screws, and brackets. In this way, an A/C system can be provided. Specifically, an A/C unit 105 can be coupled to an equipment stand 110, where the equipment stand 110 comprises a plurality of legs 125. Each leg 125 can be formed from a tube that has a cross section comprising at least one flange. In this way, the equipment stand 110 can conform to the 2010 Florida Building Code (FBC) with respect to wind loads and design pressures. Specifically, 2010 FBC, American Society of Civil Engineers (ASCE) 7, Section 301.12. In an embodiment, the equipment stand 110, which can supports equipment, such as an A/C unit 105 or a power generator, can withstand a wind load of at least one hundred ten miles per hour. In another embodiment, the equipment stand 510 can withstand wind loads of at least one hundred eighty miles per hour.

In further illustration, FIG. 1B is a prior art cross section of cylindrical tubing used in a leg of an equipment stand.

In further illustration, FIG. 2 is an end elevation view of an AIC unit 205 on an equipment stand 210 in an embodiment of the invention. As shown in FIG. 2, an equipment stand 210 is adapted to receive and secure an A/C unit 205. The A/C unit 205 rests on two rails 255 that can be configured to fit a coupled C-channel 245 on the bottom of each end of a rail 255. Each C-channel 245 can be coupled to the top of a leg 225. Also shown in FIG. 2, as positioned at the approximate top of a leg 225, is a cross-member 265. The cross-member 265 is pictured between two legs 225, running along the depth of an equipment stand 210. Each leg 225 is coupled to a base plate 235. Each base plate 235 can be attached to a roof 234 or roof host structure. Of note, the base plate 235 is not limited to being coupled to a roof 234 or a roof host structure. In other words, a base plate and, thus, an equipment stand 210 can be ground-mounted. In this way, the equipment stand 210 can sit adjacent to a structure (a commercial building, a home, etc.) at approximate ground level and not disposed on top of the structure. Of further note, multiple, different base plates 235 may not be required. In addition, the equipment stand 210 may be coupled in a different manner (welding, glue, fasteners directly through a leg 225) to the ground 233 and/or roof 234.

In further illustration, FIGS. 3A-3O shows several different cross sections of tubing used in a leg of an equipment stand in an embodiment of the invention. More specifically, in one embodiment as illustrated in FIG. 3A, cylindrical tubing used in forming a leg, made of aluminum, can be extruded such that a cross section of the cylindrical tubing can include four flanges 395 with each flange 395 extending from the center of the interior hollow space of the cylindrical tubing to one portion of the interior surface of the hollow cylindrical tube. Each flange 395 can be set at about ninety degrees from a different flange 395. Of note, the specific dimensions of the cross section can vary, but in one embodiment, the dimensions can be as shown in FIG. 3A.

FIGS. 3B, 3N, and 3O are additional embodiments of the invention illustrating a different cross section of cylindrical tubing used in forming a leg of an equipment stand. As shown in FIGS. 3B, 3N, and 3O, the cylindrical tubing can be extruded in such a way that three flanges 395 can extend from the center of the cylindrical tubing to one portion of the interior surface of the cylindrical hollow tubing. Each flange 395 can be set at about one hundred twenty degrees from a different flange 395. Of note, the specific dimensions of the cross section can vary, but, in one embodiment, the dimensions can be as shown in FIG. 3B. FIG. 3O illustrates an embodiment having an outer diameter of about 1.900 inches. Of further note, the cylindrical tubing can be made of aluminum, but it can be made of other materials as well.

In yet even further illustration, FIGS. 3C-3M show additional cross sections of tubing used to form a leg of an equipment stand. Of note, each cross section can, but does not have to, include a plurality of flanges 395. For example, in an embodiment, a tube (of varying shapes, for instance cylindrical, polygonal, or rectangular) can have one flange 395 that bisects the interior hollow space of a hollow tube thereby creating two different sections (for instance, FIGS. 3I, 3H, and 3M). Of note, the different sections can, but do not need to be, equal. The various cross sections can be achieved using any technique now known or later developed, including but not limited to extrusion. In addition, one or more inserts can also be used to achieve different cross sectional designs. In other words, an insert or inserts can be placed within a hollow cavity of a tube to achieve different cross sectional designs. (Of note, the tube can vary in size, dimension, including thickness, and shape, for instance elliptical, cylindrical, polygonal, circular, oval, square, rectangular, etc.) Further, the dimensions of each cross section are not specifically defined. Of further note, embodiments of cross sections are not limited to what are disclosed therein.

In further illustration, FIG. 4A is an embodiment of a base plate 435 for use in an embodiment of an equipment stand. A base plate 435 can include a plurality of apertures 437, for instance four. Each aperture 437 can be positioned about three-quarters of an inch from each edge so that the aperture 437 is located near the corner of the base plate 435. Each aperture 437 can be configured in such a way to enable an anchor or other fastener to pass through in order to secure the base plate 435 to a roof, a roof host structure, a ground surface, or any other surface upon which an equipment stand will be affixed. The apertures 437 can be of varying size, but in an embodiment can have a diameter equal to one-sixteenth of an inch larger than the diameter of an anchor. A larger aperture 439 can be positioned in the approximate center of the base plate 435, which is configured to allow a leg to fit. A leg of an equipment stand can be friction fitted into aperture 439. Of note, the base plate 435 can be manufactured using any technique now known or later developed. In addition, the base plate 435 can be made of aluminum alloy or any other material, such as other metals. Further, the base plate 435 can be of varying length, width, and thickness. For example, in one embodiment, the length and width of a base plate 435 can each be five inches, with the thickness varying per a set design schedule.

In further illustration, FIGS. 4B and 4C depict cross sections of embodiments of two different sized square tubes that can be nested to form a cross-member. Further, each square tube of a cross-member can be interlocked and coupled to another using a thru bolt or similar fastener.

In even further illustration, FIG. 4D illustrates a cross section of an embodiment of a rail 455, where the rail 455 is an I-beam. The dimensions of a rail 455 can vary, but FIG. 4D illustrates one possible embodiment. In FIG. 4E, a cross section of an embodiment of a C-channel 445 configured to fit a rail 455 is shown. Of note, the dimensions of a C-channel 445 can vary, but FIG. 4E shows one possible embodiment.

In yet even further illustration, FIG. 5A shows an embodiment of an equipment stand 510 upon which equipment 506, such as a power generator, is disposed upon. In this way, an equipment elevation system can be provided. The equipment elevation system can include at least one piece of equipment **506** and an equipment stand **510** supporting the at least one piece of equipment **506**. The equipment stand **510** can comprise a plurality of legs **525**, each leg **525** comprising a hollow tube defining an interior hollow space bounded by an interior surface of the hollow tube. The hollow tube can further comprise a longitudinal internal support means for strengthening the hollow tube integrally formed in the interior surface of the hollow tube. In this way, the equipment stand **510** can conform to the 2010 Florida Building Code (FBC) with respect to wind loads and design pressures. Specifically, 2010 FBC, American Society of Civil Engineers (ASCE) 7, Section 301.12. In an embodiment, the equipment stand **510**, which can support equipment **506**, such as an A/C unit or a power generator, can withstand a wind load of at least one hundred ten miles per hour. In another embodiment, the equipment stand **510** can withstand wind loads of at least one hundred eighty miles per hour.

Of note, FIG. **5**A is similar to FIG. **1**A; both illustrate equipment stands elevating equipment. Specifically, FIG. **1**A illustrates an equipment stand elevating an A/C unit, while FIG. **5**A more generically shows the elevation of any equipment, including but not limited to a power generator unit or an A/C unit. The most noticeable differences between FIGS. **1**A and **5**A are the introduction of different styled cross-members **565** and the addition of support angles **542** in FIG. **5**A. There are some additional differences with respect to dimensions of various elements, which are highlighted in the text below as well as in FIG. **5**C. It should be noted that embodiments of the invention can vary in size, though embodiments with specific dimensions may be referenced.

Specifically, equipment **506**, such as a power generator or A/C unit, can be coupled to multiple, different support angles **542**. In this way, an equipment stand **510** can be configured for mounting smaller equipment **506** on wider stands **510**. In an embodiment, there can be two support angles **542** that are coupled at each end to two different rails **555** (one at each end). Further, each support angles **542** can run along the side of the equipment stand **510** where the cross-member **565** is positioned. Of note, a support angle **542** can also be positioned along a different side of the equipment stand **510**. The support angles **542** can be manufactured using any technique now known or later developed, included but not limited to extrusion. Further, a support angle **542** can be made of any material, including but not limited to metal, such as aluminum and steel.

Each support angle **542** can be coupled to each rail **555** using any technique now known or later developed, such as with fasteners or by welding. Further the bottom of each end of a rail **555** can be configured to fit a C-channel **545**. Each C-channel **545** can be coupled to the top end of each leg **525**. In an embodiment, each leg **525** can have a cross-section similar to what is illustrated in FIG. **3**O with a diameter of about 1.900 inches. Though legs **525** with different cross-sections (similar to those illustrated in FIGS. **3**A-**3**N) can be used.

Further, a cross-member **565** can be attached between a pair of legs **525**. More specifically, in one embodiment, one end of a cross-member **565** can be attached to the approximate top end of a leg **525**. The opposite end of the cross-member **565** can be coupled to the top end of a second leg **525**. In an embodiment, the cross-member **565** can be formed by coupling three tubes. More specifically, a cross-member **565** can be formed by a first square tube, having a first perimeter, and two second square tubes, each second square tube having a second perimeter. Of note, the two second square tubes can have the same second perimeter. In this way, the first tube can nest in at least a portion of each second tube. Further, the first tube can be interlocked with each second tube and can be coupled together using a thru bolt or similar fastener. Of further note, though square tubes are referenced, the tubes can be any shape, including but not limited to oval, circular, elliptical, and rectangular.

The equipment stand **510** can further include multiple, different base plates **535** (see FIGS. **4**A and **5**C for different embodiments of a base plate). In one embodiment, there can be a total of four base plates **535**. Each base plate **535** can be configured to allow a leg **525** to fit through a center aperture.

In further illustration, FIG. **5**B is an engineering drawing of an end view of a support angle **542** in an equipment stand **510**. The dimensions of a support angle **542** can vary, but FIG. **5**B illustrates one possible embodiment. Further, the length of a support angle **542** can vary depending on the spread or size of an equipment stand **510**. The spread can be the distance between the center point of a first leg **525** and the center point of a second leg **525** as measured along the side having a cross-member **565**. In one embodiment, the spread can be twenty inches; in another embodiment, thirty inches; in yet another embodiment, thirty six inches; and, in yet another embodiment, forty two inches. In another embodiment, a support angle **542** can be three inches by five inches by three-sixteenth inches.

In yet even further illustration, FIG. **5**C is an engineering drawing of an embodiment of a base plate used in an equipment stand in an embodiment of the invention. A base plate **535** can include a plurality of apertures **537**, for instance four. Each aperture **537** can be positioned about one inch from each edge so that the aperture **537** is located near the corner of the base plate **535**. Each aperture **537** can be configured in such a way to enable an anchor or other fastener to pass through in order to secure the base plate **535** to a roof, a roof host structure, a ground surface, or any other surface upon which an equipment stand will be affixed. The apertures **537** can be of varying size, but in an embodiment can have a diameter equal to one-sixteenth of an inch larger than the diameter of an anchor. A larger aperture **539** can be positioned in the approximate center of the base plate **535**, which is configured to allow a leg to fit. The larger aperture **539** can be larger in diameter than the diameter of the leg. Of note, FIG. **5**C shows the base plate **535** as if a base plate **535** was already fitted with a leg having the specific cross-section pictured. Of further note, a leg of an equipment stand can be friction fitted into aperture **539**. Of note, the base plate **535** can be manufactured using any technique now known or later developed. In addition, the base plate **535** can be made of aluminum alloy or any other material, such as other metals. Further, the base plate **535** can be of varying length, width, and thickness. For example, in one embodiment, the base plate **435** can each be six and a half inches by five inches with a quarter inch thickness. In another embodiment, the base plate **535** can be about five inches by five inches and can vary by thickness per a set schedule.

It should be noted; the equipment stand discussed herein can be used to elevate a variety of different types of equipment, such as but not limited to A/C units and power generators. In other words, the equipment stand is not limited to supporting (elevating) the equipment discussed herein, but the stand can be used when a stand is required to meet wind zone rating requirements or other requirements related to wind loads, including but not limited to wind speeds and design pressures, as indicated in building codes.

Having thus described the invention of the present application in detail and by reference to embodiments thereof, it will be apparent that modifications and variations are possible without departing from the scope of the invention defined in the appended claims as follows:

I claim:

1. An air conditioner (A/C) system, comprising:

an A/C unit; and,

an equipment stand supporting the A/C unit, the equipment stand comprising a plurality of legs, each of the legs comprising a hollow tube defining an interior hollow space bounded by an interior surface of the hollow tube, the equipment stand further comprising four C-channels and two rails, a bottom portion of one end of each rail being fitted into one of the four C-channels and a bottom portion of an opposite end of each rail being fitted into a different one of the four C-channels, each of the C-channels being a single body having two forty-five degree angled ends facing one another and also being directly coupled to a different one of the plurality of legs, each of the C-channels further sharing a common vertical axis with the different one of the plurality of legs, each of the rails being directly coupled to the A/C unit;

each of the hollow tubes being aluminum and further comprising a longitudinal internal support means for strengthening each of the hollow tubes integrally formed in the interior surface of each of the hollow tubes.

2. The A/C system of claim **1**, wherein the equipment stand conforms to 2010 Florida Building Code, American Society for Civil Engineers (ASCE) 7, Section 301.12.

3. The A/C system of claim **1**, wherein the equipment stand is coupled to a roof.

4. The A/C system of claim **1**, wherein the equipment stand is ground-mounted.

5. The A/C system of claim **1**, wherein the equipment stand withstands a wind load of at least one hundred ten miles per hour.

6. An air conditioner (A/C) system, comprising:

an equipment stand adapted to receive and secure an A/C unit, the equipment stand comprising a plurality of hollow tubes, each hollow tube being aluminum and defining an interior hollow space bounded by an interior surface of the hollow tube and including at least one flange integrally formed along at least one portion of the interior surface of the hollow tube, the equipment stand further comprising four C-channels and two rails, a bottom portion of one end of each rail being fitted into one of the four C-channels and a bottom portion of an opposite end of each rail being fitted into a different one of the four C-channels, each of the C-channels being a single body having two forty-five degree angled ends facing one another and also being directly coupled to a different one of the plurality of hollow tubes, each of the C-channels further sharing a common vertical axis with the different one of the plurality of hollow tubes, each of the rails being directly coupled to the A/C unit.

7. The A/C system of claim **6**, wherein the equipment stand comprises four flanges, each flange separated by about a ninety degree angle.

8. The A/C system of claim **6**, wherein the equipment stand comprises three flanges, each flange separated by about a one hundred twenty degree angle.

9. The A/C system of claim **6**, wherein at least one of the plurality of hollow tubes is a cylindrical-shaped hollow tube.

10. The A/C system of claim **6**, wherein at least one of the plurality of hollow tubes is a rectangular-shaped hollow tube.

11. The A/C system of claim **6**, wherein each hollow tube has at least one flange that extends from the at least one portion of the interior surface of the hollow tube to a portion of the interior hollow space of the hollow tube.

12. The A/C system of claim **6**, wherein each hollow tube has at least one flange that bisects the interior hollow space of a hollow tube of the plurality of hollow tubes.

13. The A/C system of claim **6**, wherein each hollow tube has at least one flange that extends from one portion of the interior surface of the hollow tube through a center of the interior hollow space to a second portion of the interior surface of a hollow tube of the plurality of hollow tubes.

14. The A/C system of claim **6**, wherein the equipment stand is coupled to a roof.

15. The A/C system of claim **6**, wherein the equipment stand is ground-mounted.

16. The A/C system of claim **6**, wherein the equipment stand withstands a wind load of at least one hundred ten miles per hour.

17. An equipment elevation system, comprising:

at least one piece of equipment; and,

an equipment stand supporting the at least one piece of equipment, the equipment stand comprising a plurality of legs, each of the legs comprising a hollow tube defining an interior hollow space bounded by an interior surface of the hollow tube, the equipment stand further comprising four C-channels and two rails, a bottom portion of one end of each rail being fitted into one of the four C-channels and a bottom portion of an opposite end of each rail being fitted into a different one of the four C-channels, each of the four C-channels being a single body having two forty-five degree angled ends facing one another and also being directly coupled to a different one of the plurality of legs, each of the C-channels further sharing a common vertical axis with the different one of the plurality of legs, each of the rails being directly coupled to the at least one piece of equipment which is an air conditioner unit;

each of the hollow tubes being aluminum and further comprising a longitudinal internal support means for strengthening each of the hollow tubes integrally formed in the interior surface of each of the hollow tubes.

18. The equipment elevation system of claim **17**, wherein the equipment stand conforms to 2010 Florida Building Code, American Society for Civil Engineers (ASCE) 7, Section 301.12.

19. The equipment elevation system of claim **17**, wherein the equipment stand is coupled to a roof.

20. The equipment elevation system of claim **17**, wherein the equipment stand is ground-mounted.

21. The equipment elevation system of claim **17**, wherein the equipment stand withstands a wind load of at least one hundred ten miles per hour.

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